

Amendments to the Claims:

This listing of claims will replace all prior listings claims in the application.

Listing Of Claims:

Claim 1 (original): A color combining optical system for combining color light reflected by a dichroic film and color light transmitted through the dichroic film, wherein an optical thickness of the dichroic film increases or decreases from one end side to the other end side in an inclining direction of the dichroic film with respect to an incident optical axis of the color light reflected by the dichroic film.

Claim 2 (previously amended): A system according to claim 1, wherein a thickness of the dichroic film increases or decreases from one end side to the other end side in the inclining direction.

Claim 3 (previously amended): A system according to claim 1, wherein a refractive index of the dichroic film increases or decreases from one end side to the other end side in the inclining direction.

Claim 4 (previously amended): A system according to claim 1, wherein the optical thickness of the dichroic film increases as an incident angle of the reflected chromatic light on the dichroic film increases.

Claim 5 (currently amended): A system according to claim 1, wherein said optical system comprises a plurality of prisms cemented to one another, a color combining prism, and the said dichroic film is formed on an interface between two of the plurality of prisms, at the inside of said color combining prism.

Claim 6 (original): A system according to claim 5, further comprising a positive refracting optical element which has a positive refractive power and causes the reflected color light to be incident on said color combining prism.

Claim 7 (original): A system according to claim 6, wherein said color combining prism is joined to said positive refracting optical system.

Claim 8 (original): A system according to claim 6, wherein said color combining prism and said positive refracting optical element are integrally formed.

Claim 9 (original): A system according to claim 5, wherein said color combining prism incorporates two dichroic films for reflecting different color light beams, and
an optical thickness of at least one of the two dichroic films increases or decreases from one end side to the other end side in the inclining direction.

Claim 10 (original): A system according to claim 9, wherein the two dichroic films are formed so as not to cross each other within said color combining prism.

Claim 11 (previously amended): A system according to claim 9, wherein said color combining prism comprises three prisms.

Claim 12 (previously amended): A system according to claim 9, wherein said color combining prism comprises four prisms.

Claim 13 (original): A system according to claim 12, wherein two prisms are arranged between two dichroic films.

Claim 14 (original): A system according to claim 5, wherein said color combining prism includes
a plurality of prisms, and

a prism, of the plurality of prisms, which is located nearest to an exit side has at least three optically flat surfaces, and an exit surface also serves as a totally reflecting surface.

Claim 15 (original): A system according to claim 5, wherein said color combining prism sequentially includes, from an exit side,

a first prism having at least three optically flat surfaces, with an exit surface also serving as a totally reflecting surface,

a second prism having at least three optically smooth surfaces, and

a third prism having at least two optically smooth surfaces, and

two dichroic films which reflect different color light beams are arranged between said respective prisms so as not to cross each other.

Claim 16 (original): A system according to claim 5, wherein said color combining prism sequentially includes, from an exit side,

a first prism having at least three optically flat surfaces, with an exit surface also serving as a totally reflecting surface,

a second prism having at least two optically smooth surfaces,

a third prism having at least three optically smooth surfaces, and

a fourth prism having at least two optically smooth surfaces,

two dichroic films which reflect different color light beams are arranged between said first and second prisms and between said third and fourth prisms so as not to cross each other.

Claim 17 (original): A system according to claim 6, wherein $0.07 < L/f < 0.35$ is satisfied, where L is a diagonal length of an image display portion of said image modulation means, and f is a focal length of said positive refracting optical element.

Claim 18 (original): A system according to claim 9, wherein an angle θ_1 defined by a surface of said color combining prism which is located on an exit side and on which a dichroic film is formed and an exit surface of said color combining prism satisfies

$$20^\circ < \theta_1 < 35^\circ$$

Claim 19 (original): A system according to claim 9, wherein an angle θ_2 defined by an exit surface of said color combining prism and a surface of said color combining prism which is located on an incident side and on which a dichroic film is formed satisfies

$$40^\circ < \theta_2 < 50^\circ$$

Claim 20 (original): A system according to claim 6, wherein a focal length of at least one of said plurality of positive refracting optical elements is different from focal lengths of said remaining positive refracting optical elements.

Claim 21 (original): An image projection optical system comprising:
said color combining optical system defined by claim 1, which color-synthesizes a plurality of light beams from a plurality of image modulation means; and
a projection optical system for enlarging/projecting combined image light from said color combining optical system.

Claim 22 (original): A system according to claim 21, wherein $|L_{in}/L| > 4$ is satisfied, where L_{in} is a distance from an incident pupil of said entire overall image projection optical system including said projection optical system, said color combining prism, and said positive refracting optical element to a display portion of said image modulation means, and L is a diagonal length of the image display portion of said image modulation means.

Claim 23 (original): A projection type image display apparatus comprising:

a color separation optical system for color-separating light from a light source into a plurality of color light beams;

a plurality of image modulation means illuminated with the plurality of color light beams;

said color combining optical system defined by claim 1, which color-combines a plurality of color light beams from said plurality of image modulation means; and

a projection optical system for enlarging/projecting combined image light from said color combining optical system.

Claim 24 (original): A projection type image display apparatus comprising:

a color separation optical system for color-separating light from a light source into a plurality of color light beams;

a plurality of image modulation means illuminated with the plurality of color light beams;

and

said color combining optical system defined by claim 21, which color-combines a plurality of color light beams from said plurality of image modulation means and enlarges/projects the combined light.

Claim 25 (previously added): A system according to claim 10, wherein said color combining prism comprises three prisms.

Claim 26 (previously added): A system according to claim 10, wherein said color combining prism comprises four prisms.

Claim 27 (currently amended): A dichroic prism comprising:

a plurality of prisms cemented to one another; and

a dichroic film formed on an interface between two of the plurality of prisms,

wherein a thickness of the dichroic film changes along the interface.